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Väisänen et al.(10) **Pub. No.: US 2014/0242929 A1**(43) **Pub. Date: Aug. 28, 2014**(54) **METHOD AND ARRANGEMENT FOR TRANSMITTING AND RECEIVING RF SIGNALS THROUGH VARIOUS RADIO INTERFACES OF COMMUNICATION SYSTEMS**(30) **Foreign Application Priority Data**

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H04B 1/00 (2006.01)(72) Inventors: **Risto Väisänen**, Salo (FI); **Kim Kaltiokallio**, Salo (FI)(52) **U.S. Cl.**
CPC **H04B 1/0078** (2013.01); **H04W 88/06** (2013.01)(73) Assignee: **Nokia Corporation**, Espoo (FI)USPC **455/125**(21) Appl. No.: **14/272,191**(57) **ABSTRACT**(22) Filed: **May 7, 2014****Related U.S. Application Data**

(63) Continuation of application No. 13/614,272, filed on Sep. 13, 2012, now Pat. No. 8,755,834, which is a continuation of application No. 12/136,465, filed on Jun. 10, 2008, now Pat. No. 8,768,408, which is a continuation of application No. 09/856,746, filed on May 24, 2001, now Pat. No. 7,415,247, filed as application No. PCT/FI99/00974 on Nov. 25, 1999.

A method and arrangement for transmitting and receiving RF signals, associated with different radio interfaces of communication systems, employ a direct conversion based transceiver which substantially comprises one receive signal branch and one transmit signal branch. Mixing frequencies of the different systems are generated by a single common by use of an output frequency divider in combination with the synthesizer, and by use of filtering corresponding to a system channel bandwidth by means of a controllable low-pass filter operating at baseband frequency.

